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| 2        | 0    | weather and personal and penomenological and system | USPAT:                                      | Time stamp                           |
| 3        | 0    | weather and personal and penomenological and system | US-PGPUB<br>USPAT;                          | 2002/06/10 17:54<br>2002/06/10 17:55 |
| 4        | 0    | weather and penomenological and system              | US-PGPUB;<br>DERWENT<br>USPAT;<br>US-PGPUB; | 2002/06/10 17:55                     |
| 1        | 85   | weather and (data\$4) and multimedia and grid\$4    | DERWENT<br>USPAT;<br>US-PGPUB               | 2002/06/10 17:55                     |

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| 19 | ×           |   | US 6339707 B1 | 20020115   | 11    |
| 20 |             |   | US 6336030 B1 | 20020101   | 15    |
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| 22 |             |   | US 6323980 B1 | 20011127   | 26    |
| 23 | ×           |   | US 6321158 B1 | 20011120   | 92    |
| 24 | $\boxtimes$ |   | US 6314163 B1 | 20011106   | 35    |
| 25 | $\boxtimes$ | × | US 6307573 B1 | 20011023   | 41    |
| 26 |             |   | US 6282464 B1 | 20010828   | 32    |
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| 17 | Web calendar architecture and uses thereof   | 345/853    | 345/808  |
| 18 | Generation and distribution of personalized multimedia natural-phenomenological information                      | 702/2      | 455/414  |
| 19 | Method and system for providing wideband communications to mobile users in a satellite-based network             | 455/427    | 455/12.1;<br>455/13.3;<br>455/429  |
| 20 | Method and system for providing satellite coverage using fixed spot beams and scanned spot beams                 | 455/13.2   | 455/12.1;<br>455/13.3;<br>455/427  |
| 21 | Multimedia technique for operating devices in a vehicle  | 701/1      | 345/7;<br>701/29   |
| 22 | Hybrid picocell communication system   | 359/159    | 359/154;<br>359/155;<br>359/172  |
| 23 | Integrated routing/mapping information   | 701/201    | 340/995;<br>342/357.09;<br>701/209;<br>701/211                             |
| 24 | Hybrid universal broadband telecommunications using small radio cells interconnected by free-space optical links | 379/56.2   | 359/109;<br>359/152;<br>455/449  |
| 25 | Graphic-information flow method and system for visually analyzing patterns and relationships                     | 345/764    | 345/440;<br>345/803;<br>345/804;<br>345/854;<br>705/26;<br>707/512         |
| 26 | Technique for effectively providing audio information in a vehicle   | 701/1      | 340/988;<br>340/990;<br>701/200;<br>701/211;<br>701/36                     |
| 27 | Web calendar architecture and uses thereof   |            | 345/963  |
| 28 | Technique for effectively locating an object   | 701/1      | 307/10.2;<br>340/426;<br>342/357.07;<br>342/357.09;<br>455/404;<br>701/207 |

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| 17 |                      | Wang, Shou-Chung et al.       |   |   |   |   |   |   |   |
| 18 |                      | Burfeind, Craig et al.        |   |   |   |   |   |   |   |
| 19 |                      | Wainfan, S. Lynne et al.      |   |   |   |   |   |   |   |
| 20 |                      | Houston, Sam W. et al.        |   |   |   |   |   |   |   |
| 21 |                      | Obradovich, Michael L. et al. |   |   |   |   |   |   |   |
| 22 |                      | Bloom, Scott H.               |   |   |   |   |   |   |   |
| 23 |                      | DeLorme, David M. et al.      |   |   |   |   |   |   |   |
| 24 |                      | Acampora, Anthony             |   |   |   |   |   |   |   |
| 25 |                      | Barros, Barbara L.            |   |   |   |   |   |   |   |
| 26 |                      | Obradovich, Michael L.        |   |   |   |   |   |   |   |
| 27 |                      | Wang, Shou-Chung et al.       |   |   |   |   |   |   |   |
| 28 |                      | Obradovich, Michael L. et al. |   |   |   |   |   |   |   |

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| 29 | Data processing system and method  | 382/154      | 348/47;<br>382/106;<br>382/107;<br>382/278;<br>382/303;<br>382/304                                     |
| 30 | Data management system   | 707/3        | 707/104.1  |
| 31 | Method for delivering separate design and content in a multimedia publishing system  | 707/522      | 707/515  |
| 32 | System and method for adjusting climate control in vehicles  | 701/1        | 165/11.1;<br>165/203;<br>165/205;<br>165/208;<br>165/211;<br>236/49.3;<br>237/2A;<br>454/75;<br>701/36 |
| 33 | Intelligent public transit system using dual-mode vehicles   | 701/117      | 701/23   |
| 34 | Remote data access and management system   | 707/503      | 382/187  |
| 35 | Automatic development of computer software   | 706/62       | 706/46;<br>706/61  |
| 36 | Internet transaction acceleration  | 725/109      | 348/552;<br>380/212;<br>380/242  |
| 37 | Immersive imaging method and apparatus   | 348/36       | 348/48   |
| 38 | Method and apparatus for searching a guide using program characteristics   | 345/721<br>· | 348/906;<br>725/45;<br>725/46  |
| 39 | Method and system for adjusting settings of vehicle functions  | 701/49       | 307/10.1;<br>340/461;<br>701/1;<br>701/36  |
| 40 | System for providing global portable internet access using low earth orbit satellite and satellite direct radio broadcast system | 709/219      | 725/63   |
| 41 | System and method for management of connection oriented networks   | 709/200      | 709/238;<br>709/241  |

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| 29 |                      | Woodfill, John Iselin et al.  |   |   |   |   |   |   |   |
| 30 | •                    | Tran, Bao Q.                  |   |   |   |   |   |   |   |
| 31 |                      | Ferrel, Patrick J. et al.     |   |   |   |   |   |   |   |
| 32 |                      | Obradovich, Michael L. et al. |   |   |   |   |   |   |   |
| 33 |                      | McCrary, Homer T.             |   |   |   |   |   |   |   |
| 34 |                      | Tran, Bao Q. et al.           |   |   |   |   |   |   |   |
| 35 |                      | Li, Chou H.                   |   |   |   |   |   |   |   |
| 36 |                      | Norsworthy, John P. et al.    |   |   |   |   |   |   |   |
| 37 |                      | McCutchen, David              |   |   |   |   |   |   |   |
| 38 |                      | Schein, Steven Michael et al. |   |   |   |   |   |   |   |
| 39 |                      | Obradovich, Michael L. et al. |   |   |   |   |   |   |   |
| 40 |                      | Rothblatt, Martine A.         |   |   |   |   |   |   |   |
| 41 |                      | Johnson, William A.           |   |   |   |   |   |   |   |

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| 42 | Hybrid universal broadband telecommunications using small radio cells interconnected by free-space optical links          | 379/56.2   | 359/109;<br>359/152                       |
| 43 | Method and system for providing wideband communications to mobile users in a satellite-based network                      | 455/427    | 455/12.1;<br>455/13.3                     |
| 44 | Motion estimation and compensation of video object planes for interlaced digital video                                    | 382/236    | 348/578                                   |
| 45 | Web calendar architecture and uses thereof  | 345/733    | 345/749;<br>345/751;<br>345/963           |
| 46 | Electronic television program guide schedule system and method with data feed access                                      | 348/731    | 348/564;<br>348/569;<br>348/906           |
| 47 | Multimedia information and control system for automobiles   | 701/1      | 340/815.4;<br>345/7;<br>701/29            |
| 48 | Motion estimation and compensation of video object planes for interlaced digital video                                    | 382/236    |   |
| 49 | Computer program apparatus for determining behavioral profile of a computer user  | 705/10     | 705/1                                     |
| 50 | Fully distributed processing memory element   | 712/20     | 709/238;<br>712/14                        |
| 51 | APAP I/O programmable router  | 712/13     | 712/10;<br>712/12;<br>712/14              |
| 52 | Evacuated tube transport  | 104/138.1  | 104/130.05;<br>104/27;<br>104/28          |
| 53 | Travel reservation information and planning system  | 701/201    | 340/990;<br>701/208;<br>701/211;<br>705/5 |
| 54 | Hierarchical encapsulation of instantiated objects in a multimedia authoring system including internet accessible objects | 717/100    | 717/123                                   |
| 55 | Advanced optical fiber communications network   | 359/124    | 359/118;<br>359/125;<br>359/167           |

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| 42 |                      | Acampora, Anthony             |   |   |   |   |   |   |   |
| 43 |                      | Wainfan, S. Lynne et al.      |   |   |   |   |   |   |   |
| 44 |                      | Eifrig, Robert O. et al.      |   |   |   |   |   |   |   |
| 45 |                      | Wang, Shou-Chung et al.       |   |   |   |   |   |   |   |
| 46 |                      | Knee, Robert Alan et al.      |   |   |   |   |   |   |   |
| 47 |                      | Obradovich, Michael L. et al. |   |   |   |   |   |   |   |
| 48 |                      | Eifrig, Robert O. et al.      |   |   |   |   |   |   |   |
| 49 |                      | Gerace, Thomas A.             |   |   |   |   |   |   |   |
| 50 |                      | Barker, Thomas Norman et al.  |   |   |   |   |   |   |   |
| 51 |                      | Collins, Clive Allan et al.   |   |   |   |   |   |   |   |
| 52 |                      | Oster, Daryl                  |   |   |   |   |   |   |   |
| 53 |                      | DeLorme, David M. et al.      |   |   |   |   |   |   |   |
| 54 |                      | Gudmundson, Norman K. et al.  |   |   |   |   |   |   |   |
| 55 |                      | Williams, Larry et al.        |   |   |   |   |   |   |   |

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| 56 | Ergonomic man-machine interface incorporating adaptive pattern recognition based control system                              | 700/17     | 382/181;<br>382/190;<br>700/83   |
| 57 | Fiber optic network with wavelength-division-multiplexed transmission to customer premises                                   | 359/125    | 359/173;<br>370/907  |
| 58 | Style sheets for publishing system   | 707/522    | 707/513;<br>707/516;<br>707/526  |
| 59 | Inter-active program guide with default selection control  | 725/45     | 348/906;<br>725/102;<br>725/33;<br>725/41;<br>725/43;<br>725/53;<br>725/61;<br>725/8 |
| 60 | Method and apparatus for determining behavioral profile of a computer user   | 705/10     | 705/1;<br>725/14;<br>725/46  |
| 61 | Computer aided map location system   | 701/200    | 340/990;<br>340/995;<br>342/357.13;<br>701/208;<br>701/212                           |
| 62 | Advanced parallel array processor (APAP)   | 712/23     |  |
| 63 | Fiber optic network with wavelength-division-multiplexed transmission to customer premises                                   | 359/152    | 359/125;<br>359/167  |
| 64 | Computer aided routing and positioning system  | 455/456    | 340/990;<br>340/995;<br>701/201;<br>701/208;<br>701/211;<br>701/213                  |
| 65 | Idle time multimedia viewer method and apparatus for collecting and displaying information according to user defined indicia | 709/219    | 345/716  |
| 66 | N-dimensional modified hypercube   | 712/10     | 712/1;<br>712/11;<br>712/12;<br>712/13;<br>712/15                                    |

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| 56 |                      | Hoffberg, Steven M. et al.   |             |   |   |   |   |   |   |
| 57 |                      | Williams, Larry et al.       |             |   |   |   |   |   |   |
| 58 |                      | Ferrel, Patrick J. et al.    |             |   |   |   |   |   |   |
| 59 |                      | LaJoie, Mike L. et al.       |             |   |   |   |   |   |   |
| 60 |                      | Gerace, Thomas A.            |             |   |   |   |   |   |   |
| 61 |                      | DeLorme, David M. et al.     |             |   |   |   |   |   |   |
| 62 |                      | Barker, Thomas Norman et al. | Ø           |   |   |   |   |   |   |
| 63 |                      | Williams, Larry et al.       | ×           |   |   |   |   |   |   |
| 64 |                      | DeLorme, David M. et al.     | oxtimes     |   |   |   |   |   |   |
| 65 |                      | Tarabella, Robert M.         | $\boxtimes$ |   |   |   |   |   |   |
| 66 |                      | Barker, Thomas Norman et al. | $\boxtimes$ |   |   |   |   |   |   |

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| 67 | Human factored interface incorporating adaptive pattern recognition based controller apparatus | 713/600    | 348/110;<br>348/27;<br>348/734;<br>712/240;<br>712/245   |
| 68 | Image query system and method  | 345/835    | 345/838;<br>345/968;<br>382/209;<br>382/220;<br>382/305;<br>707/4;<br>707/6                                    |
| 69 | Advanced parallel array processor computer package   | 712/10     | 709/238;<br>712/14;<br>712/20  |
| 70 | Advanced parallel array processor (APAP)   | 712/20     | 712/14   |
| 71 | Advanced parallel array processor (APAP)   | 712/20     | 711/149;<br>712/11;<br>712/15  |
| 72 | Method and apparatus for routing confidential information                                      | 455/2.01   | 7 12710  |
| 73 | Electronic television program guide channel system and method                                  | 725/42     | 348/569;<br>348/906;<br>725/40;<br>725/41;<br>725/43;<br>725/44  |
| 74 | SIMD/MIMD processing memory element (PME)  | 709/214    | 711/147;<br>712/201  |
| 75 | Advanced parallel array processor(APAP)  | 712/11     | 712/14;<br>712/15  |
| 76 | Electronic television program guide schedule system and method with data feed access           | 725/43     | 345/721;<br>345/733;<br>348/564;<br>348/569;<br>348/906;<br>725/45;<br>725/54;<br>725/58;<br>725/60;<br>725/61 |
| 77 | Advanced parallel processor including advanced support hardware                                | 712/16     |  |

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| 68 |                      | Barber, Ronald Jason et al.  | $\boxtimes$ |   |   |   |   |   | · |
| 69 |                      | Dapp, Michael Charles et al. | ×           |   |   |   |   |   |   |
| 70 |                      | Barker, Thomas Norman et al. | ×           |   |   |   |   |   |   |
| 71 | ,                    | Barker, Thomas Norman et al. | ×           |   |   |   |   |   |   |
| 72 |                      | Dougherty, Brian P. et al.   | ×           |   |   |   |   |   |   |
| 73 |                      | Alten, Jerry et al.          | ×           |   |   |   |   |   |   |
| 74 |                      | Barker, Thomas N. et al.     | ×           |   |   |   |   |   |   |
| 75 |                      | Barker, Thomas N. et al.     | ☒           |   |   |   |   |   |   |
| 76 |                      | Knee, Robert A. et al.       |             |   |   |   |   |   |   |
| 77 |                      | Dapp, Michael C. et al.      | Ø           |   |   |   |   |   |   |

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| 78 | Electronic television program guide schedule system and method including virtual channels        | 725/43     | 348/570;<br>348/906;<br>725/100;<br>725/101;<br>725/104;<br>725/30;<br>725/61 |
| 79 | Image query system and method  | 345/700    | 345/835;<br>382/209;<br>382/220;<br>382/305;<br>707/6                         |
| 80 | Method of facilitating learning using a learning complex   | 434/432    |   |
| 81 | Computer aided routing system  | 701/200    | 340/990;<br>340/995;<br>701/23;<br>701/82                                     |
| 82 | System and method for generating an information display schedule for an electronic program guide | 725/40     | 348/906;<br>725/104;<br>725/36;<br>725/42;<br>725/43;<br>725/48               |
| 83 | Self-optimizing method and machine   | 706/62     |   |
| 84 | Multimedia interface and method for computer system  | 700/83     | 345/978;<br>706/10;<br>706/11;<br>706/45;<br>706/911;<br>707/500.1            |
| 85 | Multimedia interface and method for computer system  | 706/11     | 345/978;<br>379/908;<br>381/110;<br>700/83;<br>706/45;<br>707/500.1           |

|    | Retrieval<br>Classif | Inventor                  | s           | С | P | 2 | 3 | 4 | 5 |
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| 78 |                      | Miller, Larry et al.      | $\boxtimes$ |   |   |   |   |   |   |
| 79 |                      | Barber, Ronald J. et al.  | Ø           |   |   |   |   |   |   |
| 80 |                      | Durkin, James C. et al.   | ×           |   | Ġ |   |   |   |   |
| 81 |                      | DeLorme, David M. et al.  | $\boxtimes$ |   |   |   |   |   |   |
| 82 |                      | Davis, Bruce et al.       | ×           |   |   |   |   |   |   |
| 83 |                      | Li, Chou H.               | Ø           |   |   |   |   |   |   |
| 84 |                      | Quentin, George H. et al. | ⊠           |   |   |   |   |   |   |
| 85 |                      | Isle, Brian A. et al.     |             |   |   |   |   |   |   |

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# MIND AND ARTIFICIAL INTELLIGENCE

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In the history of philosophy and of scientific thinking there are known some theories of mind. Among these may be mentioned:

- the monist theory, for which the fundamental reality is mind;
- the dualist theory, for which mind and body are of a different nature;
- the interconnectivity theory, for which the mental activity of the brain is a consequence of the huge number of interconnections among neurones;
- the identity theory, for which "mind is the brain" or "brain is the mind", a theory based on a biological philosophy [1];
- the data processing theory (informatic theory), for which the mind is the software of the brain and for which there is no fundamental difference between natural intelligence (NI) and artificial intelligence (AI);
- the theory of non-existence of the mind, for which the mind is a system of semantic structures (or meaning structures [2]) through which a person is in contact with the physical and social worlds.

Some of these theories have many points in common and, of course other theories may be mentioned or may be advanced.

Perhaps the most important problem to be clarified, both for a theory of mind and for the artificial intelligence theory is the relation between natural and artificial intelligence.

Alan Newell, a well-known scientist and specialist in artificial intelligence, believing many years, together with Herbert Simon, that NI = AI, writes:

"One of the world's deepest mysteries - the nature of mind - is at the centre of AI [...]. Its discovery which will no more be a simple act thant he discovery of the nature of life, or the origins of the universe, will be a major chapter in the scientific advance of mankind. There will be a coherent account of the nature of intelligence, knowledge, intention, desire etc., and how it is possible for the phenomena that cluster under these names to occur in our physical universe" [3].

AI practice cannot solve the mind problem. But it can help to acquire a new understanding of both mind and AI theory.

Concerning, for instance, the modelling of space and time in data-processing programs and in AI programs, Bernard Meltzer, an expert in expert systems, observes that these

# programs

"seem to model a ghost, ethereal world in which not only there is no space or time, but not even physical objects: a solipsistic world[...] [4]".

Something is lacking in AI to have all what we know about human mind, i.e.: it has not the feeling of continuity of the objects the man sees, continuity of itself, feeling of continuity of time, intuition, genuine creation and so on. We think that such phenomena are not purely structural, but have components that we call purely phenomenological.

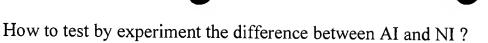
Mind processes are without any doubt, informational processes. We may question only the nature of mental information, in what degree it is identical or similar to the structural information of computers and AI programs.

We may think that in a mind, information has not only structural but also yet unknown phenomenological components. And these phenomenological phenomena (related, in a way, to the phenomenology of Husserl) cannot manifest outside matter, but in a special form of matter, that we called *informatter*. It is not possible to present here all the ontological bases [5][6][7] of such an idea, but for the purpose of this paper it is sufficient to say that any biological body is formed of the usual structural substance and informatter, the latter offering to a mind all what AI has not: continuity and phenomenological senses of which every mind is aware.

If we take this theses (I) as an initial point, we may derive a lot of consequences, shortly presented as follows:

- II. Mental information has both structural and phenomenological components.
- III. The brain is both structural-physical (the usual body) and phenomenological-physical, that is the brain is physical and alive, that is biological.
- IV. The brain is a substratum for structural-phenomenological informational processes.
- V. The mind is the entire informational activity of the brain, structural and phenomenological.
- VI. Mind is not the brain, but the brain contains the mind.
- VII. The brain is therefore a physical-informational device.

AI has nothing phenomenological (in the sense explained above). Being intelligent, an AI system has a psychology but its psychology is not mental in itself. AI offers only an illusion of a mental psychology, although, we must recognise, sometimes, a very good illusion.



A criterion might be the test of creativity, but this is delicate even for NI; otherwise, to ask where a piece of knowledge is placed inside the intelligent system (artificial or natural). An AI system will point to some locations of memory. A man cannot indicate such location. It may be objected that man has an associative memory and has not sensors for his own brain, but we think that it is not only this, because the brain cannot be reduced only to the network of neurons, also cannot be reduced to its molecules, especially those inside the neurones, which may have a role in the computational processes of the brain. If we take into account its informaterial component, this one not having a spatial character, the mental processes will never have a totally spatial localisation. Some philosophical systems of antiquity spoke, perhaps not without reason, about infinity of mind.

Never will a non-mental intelligence say like Anna de Noaille:

"Je t'avais regardé. Le regard est un contact plus nete et dur que le mineral. C'est un chosc qui ebranle deux esprits..."[8].

Never will a non-alive artificial intelligence transmit or receive something from mental to mental, as in the above example, a reciprocal mirroring of the eyes of two beings.

Some considerations concerning the human mind may be drawn from a theory of a problem [9] suggested by the Romanian philosopher Lucian Blaga.

Some other considerations concerning the human mind may be deduced from Kant's theory of intellect and reason, and in summary we may say that AI has not reason in the kantian sense, only a human may have this reason, or in the future an alive AI.

In fact, we think that a structural-phenomenological theory of mind is possible, which might explain the similarities and the differences between AI and NI.

We may say that the semantics of AI is only structural, and the semantics of NI is structural-phenomenological.

Ignoring phenomenological processes in mental thinking has far reaching consequences. The phenomenological processes may have a non-formal character, the structural processes, by definition, are formal, in the last instance are computational. If we conceive only a structural reality, this reality is then a computational process. The Universe, man and society would be computational processes.

If we recognise the phenomenological processes, the physical universe may still be a computational process, but not the man and not the society, although man and society have a great part of formal in them.

We are faced with two philosophical possibilities:

- a) Either we recognise (like the science of today, especially physics and biology) only structural processes and then the entire reality is a computational process.
- b) Or we recognise both structural and phenomenological processes as distinct and correlated, and then the reality is not entirely a computational process.

Michael Conrad, an emerging scientist in molecular computing, talking about the Turing-Church thesis on computability gives it the following interpretation:

"any system or process physically realisable must be effectively computable" [10].

By "effectively computable" one understands computable by a formal process with a succession of simple operations on strings of symbols, as it is the case, for instance, of a data-processing program. Conrad's extended thesis says that any realisable physical process is equivalent to a computation, even if is not effectively computable. Perhaps, at the molecular level, the brain succeeds to make computations that even if they are not of the effective type, they are still formal computations. Let us call *integrated computations* these noneffective computations. But taking place at the molecular level they are also structural and they cannot explain mind phenomena, although may be very powerful in computing and heuristics.

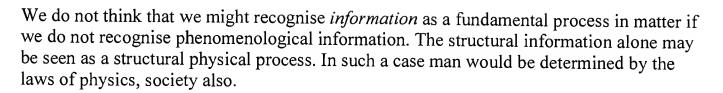
The first philosophical position (a) cannot explain mind phenomena. Today, neither physics nor information science can neglect mental phenomena, which are present in various forms perhaps in every biological body, under the form of structural-phenomenological processes. A mental process is essential in every living organism in order to have the phenomenological unity which is recognised, by biologists, above the structural unity of the body.

The mental is a fundamental phenomenon in the living matter and the recognition of this assertion is compatible, in our opinion, with the second (b) proposed philosophical position (which recognises a structural-phenomenological reality). Only the structural part of reality is computational.

Although the physical universe may be born by specific phenomenological-structural processes, the physical universe, if alone, is structural and remains and remains a computational process obeying the laws of physics.

The biological universe is not only structural, and in this second approximation even the physical universe is influenced by the mental behaviour of living organisms.

Living organisms, especially man, because of the great structural-phenomenological possibilities, have a huge informational disponibility. The human mind, being also phenomenological, is not determined completely by the laws of physics and biology.



We think that information may be taken into consideration, for the Universe, along with the four fundamental forces of physics. Concerning the profound matter from which the Universe emerged, the phenomenological information may remain the only fundamental phenomenon.

For man, information is added to the laws of physics to become man, and information is added to the laws of physics to make possible the society. And if information exists under structural form due to its initial phenomenological basis, then society could not be deeply explained without the fundamental existence of phenomenological information.

Therefore, contrary to the opinion that the entire world is working like a computer, an opinion accepted even by some philosopher like A.Sloman [11], we think that the world is working like a computer but not quite. We believe that philosophy and science too, may become structural-phenomenological one day.

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- \* With an English edition on the web, *The Depths of Existence*, Bucharest, 1997, <a href="http://www.racai.ro/books/doe">http://www.racai.ro/books/doe</a>.
- \*\* See also on the author's Web-site:
  <a href="http://www.racai.ro/~ncristin/MD-Web/mdraganescu.html">http://www.racai.ro/~ncristin/MD-Web/mdraganescu.html</a>

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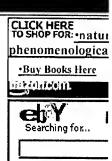
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# husserl's positive argument and phenomenology Saleem Waraich

Phenomena are mental events. They are limited to consciousness, and thus phenomenology is, though not limited to, the science of consciousness. A precise formulation of the positive argument, along with penetration into the meanings of key concepts, will reward an exact definition of phenomenology. Among other things, it will be found that Husserl's account of phenomenology is not in accord with the standard textbook gloss.

Nature is considered a unity of spatio-temporal being subject to universal, precise, generalizing laws. Naturalism is the science that takes advantage of the fact that nature is a unity. It makes use of the fact that nature is explainable, that laws govern its actions, and attempts to discover and formulate those laws. One way of stating the positive argument is to call naturalism naïve. More specifically, it is naïve is regard to its point of departure. When it sets off to discover the laws by which an object is governed, it assumes the object is a part of nature. It thinks the object is a part of the unity of spatio-temporal being and thus subject to universal, precise, generalizing laws. Husserl wants to say that not everything is best considered as nature. The object domain of naturalism is limited. It's limited to objects of nature. Consciousness is not nature. Experience as consciousness does not give or contact an object. Experiences in consciousness do not mutually legitimate and correct each other the way objects of nature do. Consciousness is special. Naturalism has no business studying consciousness. Phenomenology does. In summary: 1) Nature is a unity of spatio-temporal being subject to exact, universal laws. 2) Naturalism should naturalize objects of nature only. 3) Consciousness is not an object of nature and 4) therefore natural science cannot study consciousness.

Naturalism however, has been studying consciousness. It has been studying the "natural" aspects of consciousness through psychology. This leads us to a consequence of the positive argument which, for us, clarifies and penetrates the meanings of natural and phenomenological investigations. In doing so it will be made known that phenomena are mental events, that is, are events in consciousness. Objects which admit of being part of nature have unquestionable data. A backpack weighs a certain amount, has a certain texture, and can hold a certain load. Similarly, consciousness can be thought of as containing certain unquestionable data. The aim of natural science would then be to know this unquestionable data in an objectively valid, scientific manner. Perception could thus be thought of as neuronal events in which transmitters stimulate receptors. The corresponding electrical and chemical data are unquestionable. Remember, natural science obtains this data from objects which are themselves physical, or a part of the spatio-temporal unity of nature. This is crucial. Naturalism concerns itself with dependencies that are physical. Phenomenology does not! A phenomena is not in any way physical. As Husserl says, "A phenomena is no substantial unity; it has no real properties, it knows no real parts, no real changes, and no causality." (106) Phenomena are precisely those things which are not physical and do not have unquestionable data. It now becomes apparent why phenomena are not meant to be naturalized. They necessarily have nothing to do with the physical. They're mental. With regard to the characterization of a phenomenological investigation there are definitive consequences. Their data is questionable. There are no instruments with which one can measure and interpret their nature. They are events in consciousness and our consciousness is the only tool we have to get at their nature. While natural science aims to know unquestionable data in an objectively valid, scientific manner, phenomenology aims to know questionable data. Phenomenology studies the questionable data of events that occur in the realm of consciousness. If phenomenology studies objects, it does so only after they appear in consciousness. An object after it has appeared in consciousness is what we will can a

phenomenon and we do so because it must lack relation to the physical. A phenomenological investigation concerns itself with the non-physical, and the questionable. Furthermore, the only tool, or instrument with which the non-physical and questionable can be analized is consciousness.

I want to say this poses a problem. I will formulate the problem, then attempt to solve it. In solving it I will come to a definition of phenomenology in contrast to the standard textbook gloss. If phenomenology investigates objects whose relations to the physical are ignored it stands on shaky ground. The physical is real. The physical is tangible and safe. It provides us with a definitive way to characterize and understand objects. To reject an object's relation to the physical seems to be asking for trouble. To make it worse, the objects aren't even treated as objects. They're considered as mental events! That is to say they are considered as representations of objects in the theater of our minds. A phenomenologist investigates questionable properties in the highly subjective and personal realm of consciousness! This is exactly the picture laid by the standard textbook gloss. All phenomenology can do is describe feeble, fleeting, and personal events in consciousness. It seems impossible to say such a theory would lay solid foundations for philosophy as rigorous science. But yet Husserl takes note of this seemingly weak conception of phenomenology: one would "have before its eyes only being as the correlate of consciousness." (89) Foundation and solidity would be lost in spheres of representation. Here we make a claim. If phenomenology is to hold ground as a legitimate science phenomena must not be viewed as finding its origin in consciousness. Phenomena appear in consciousness. They are separate from consciousness. Husserl clarifies further just what an phenomenological investigation entails. We already know it will not be seeking objectively valid data. It will have nothing to do with the physical and must in some way grasp the essence of an unusual object; an object that "has no real parts", "no substantial unity" and that appears in consciousness: "the investigation must be directed towards a scientific essential knowledge of consciousness, towards that which consciousness itself is,... toward what consciousness means, as well as toward the different ways... it intends the objective." (89)

How are phenomena to be understood? By knowledge of the consciousness in which they appear. Phenomenology concerns itself with knowledge of what consciousness "is", as opposed to how it seems to us to be. It strives for essential knowledge of consciousness. Consciousness is also thought to hold meaning. In finding what consciousness "means" it gets at the root of experience and attempts to make a claim as to its significance. Phenomenology then finds knowledge of what consciousness means, as opposed to what it can be thought to say nothing about. In finding how it "intends the objective" it makes claims as to whether or not consciousness faithfully paints our understanding of unquestionable data, or if it does so with a great deal of uncertainty. Phenomenology does not intend the subjective. It does not merely investigate how my consciousness is different from yours. It thus finds the laws by which experience as consciousness is separate from mere opinions. Phenomenology then does not lay foundations for philosophy by focusing on all the variables involved with consciousness. Only after and during the acquisition of this knowledge can knowledge of the phenomenon itself be acquired. The phenomena and the consciousness in which they appear are the object domain of phenomenology. This both legitimates and substantiates phenomenology. It legitimates it in so far as phenomenology is not thought to deal with subjective objects that are seen through the subjective haze of consciousness, but rather to deal with non-physical characteristics of an object appearing, yet separate from, an analyzable consciousness. It substantiates phenomenology in so far that it can be thought of as having a purpose. It purposes to know what consciousness is and means.

Natural science cannot study consciousness because consciousness is not nature. Phenomenology will study consciousness. An object, after is appears in consciousness is a phenomenon. A phenomenological investigation concerns itself with the non-physical, and the questionable. Though consciousness is the only tool we have to get at this type of data, this in no way gives us a weak conception of phenomenology for a number of reasons: 1) Phenomena do not find their origin in consciousness. They appear in, yet are separate from consciousness. 2) The phenomena and the consciousness in which they appear are the

object domain of phenomenology. Phenomenology concerns itself with consciousness. Consciousness is held to be analyzable and one major task of phenomenology is to obtain knowledge of what consciousness is. 3) Consciousness if thought to hold meaning and, 4) Phenomenology aims to know the ways in which experience as consciousness intends the objective. Phenomenology is not the descriptive science of consciousness. It does not merely describe consciousness, nor does it describe the way objects, or phenomena, seem. Phenomenology is the science of non-physical mental events treated as entities separate

from, but appearing in, an analyzable consciousness.

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phenomenon and we do so because it must lack relation to the physical. A phenomenological investigation concerns itself with the non-physical, and the questionable. Furthermore, the only tool, or instrument with which the non-physical and questionable can be analized is consciousness.

I want to say this poses a problem. I will formulate the problem, then attempt to solve it. In solving it I will come to a definition of phenomenology in contrast to the standard textbook gloss. If phenomenology investigates objects whose relations to the physical are ignored it stands on shaky ground. The physical is real. The physical is tangible and safe. It provides us with a definitive way to characterize and understand objects. To reject an object's relation to the physical seems to be asking for trouble. To make it worse, the objects aren't even treated as objects. They're considered as mental events! That is to say they are considered as representations of objects in the theater of our minds. A phenomenologist investigates questionable properties in the highly subjective and personal realm of consciousness! This is exactly the picture laid by the standard textbook gloss. All phenomenology can do is describe feeble, fleeting, and personal events in consciousness. It seems impossible to say such a theory would lay solid foundations for philosophy as rigorous science. But yet Husserl takes note of this seemingly weak conception of phenomenology: one would "have before its eyes only being as the correlate of consciousness." (89) Foundation and solidity would be lost in spheres of representation. Here we make a claim. If phenomenology is to hold ground as a legitimate science phenomena must not be viewed as finding its origin in consciousness. Phenomena appear in consciousness. They are separate from consciousness. Husserl clarifies further just what an phenomenological investigation entails. We already know it will not be seeking objectively valid data. It will have nothing to do with the physical and must in some way grasp the essence of an unusual object; an object that "has no real parts", "no substantial unity" and that appears in consciousness: "the investigation must be directed towards a scientific essential knowledge of consciousness, towards that which consciousness itself is,... toward what consciousness means, as well as toward the different ways... it intends the objective." (89)

How are phenomena to be understood? By knowledge of the consciousness in which they appear. Phenomenology concerns itself with knowledge of what consciousness "is", as opposed to how it seems to us to be. It strives for essential knowledge of consciousness. Consciousness is also thought to hold meaning. In finding what consciousness "means" it gets at the root of experience and attempts to make a claim as to its significance. Phenomenology then finds knowledge of what consciousness means, as opposed to what it can be thought to say nothing about. In finding how it "intends the objective" it makes claims as to whether or not consciousness faithfully paints our understanding of unquestionable data, or if it does so with a great deal of uncertainty. Phenomenology does not intend the subjective. It does not merely investigate how my consciousness is different from yours. It thus finds the laws by which experience as consciousness is separate from mere opinions. Phenomenology then does not lay foundations for philosophy by focusing on all the variables involved with consciousness. Only after and during the acquisition of this knowledge can knowledge of the phenomenon itself be acquired. The phenomena and the consciousness in which they appear are the object domain of phenomenology. This both legitimates and substantiates phenomenology. It legitimates it in so far as phenomenology is not thought to deal with subjective objects that are seen through the subjective haze of consciousness, but rather to deal with non-physical characteristics of an object appearing, yet separate from, an analyzable consciousness. It substantiates phenomenology in so far that it can be thought of as having a purpose. It purposes to know what consciousness is and means.

Natural science cannot study consciousness because consciousness is not nature. Phenomenology will study consciousness. An object, after is appears in consciousness is a phenomenon. A phenomenological investigation concerns itself with the non-physical, and the questionable. Though consciousness is the only tool we have to get at this type of data, this in no way gives us a weak conception of phenomenology for a number of reasons: 1) Phenomena do not find their origin in consciousness. They appear in, yet are separate from consciousness. 2) The phenomena and the consciousness in which they appear are the

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object domain of phenomenology. Phenomenology concerns itself with consciousness. Consciousness is held to be analyzable and one major task of phenomenology is to obtain knowledge of what consciousness is. 3) Consciousness if thought to hold meaning and, 4) Phenomenology aims to know the ways in which experience as consciousness intends the objective. Phenomenology is not the descriptive science of consciousness. It does not merely describe consciousness, nor does it describe the way objects, or phenomena, seem. Phenomenology is the science of non-physical mental events treated as entities separate from, but appearing in, an analyzable consciousness.

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| 2 |                      | White, Chris M. et al. | × |   |   |   |   |   |   |
| 3 |                      | Burfeind, Craig et al. | ⊠ |   |   |   |   |   |   |
| 4 |                      | Barros, Barbara L.     | × |   |   |   |   |   |   |

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| 1 |   | ☒ | US 20020069020<br>A1 | 20020606   | 28    |
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|   | Title   | Current OR | Current XRef |
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| 1 | Generation and distribution of personalized multimedia natural phenomenological information | 702/2      |              |
| 2 | Generation and distribution of personalized multimedia natural-phenomenological information | 702/2      | 455/414      |

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| 1 |                      | Burfeind, Craig et al. | $\boxtimes$ |   |   |   |   |   |   |
| 2 | ,                    | Burfeind, Craig et al. |             |   |   |   |   |   |   |

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| 3 | ☒ | ⊠ | US 6360172 B1        | 20020319   | 29    |

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| 1 | Generation and distribution of personalized multimedia natural phenomenological information | 702/2      |  |
| 2 | Method and system for presenting television programming and interactive entertainment       | 345/717    | 345/719;<br>345/733;<br>345/758;<br>348/552;<br>725/112;<br>725/113;<br>725/136;<br>725/61 |
| 3 | Generation and distribution of personalized multimedia natural-phenomenological information | 702/2      | 455/414  |

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| 1 |                      | Burfeind, Craig et al. |   |   |   |   |   |   |   |
| 2 |                      | White, Chris M. et al. |   |   |   |   |   |   |   |
| 3 |                      | Burfeind, Craig et al. |   |   |   |   |   |   |   |

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| 4  |   |   | US 6169954 B1        | 20010102   | 32    |
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| 8  |   |   | US 5875108 A         | 19990223   | 110   |
| 9  |   |   | US 5848396 A         | 19981208   | 31    |
| 10 |   |   | US 5774357 A         | 19980630   | 97    |

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| 1  | Generation and distribution of personalized multimedia natural phenomenological information                                      | 702/2      |  |  |  |  |  |
| 2  | Encapsulated, streaming media automation and distribution system   | 725/47     | 725/87   |  |  |  |  |
| 3  | Generation and distribution of personalized multimedia natural-phenomenological information                                      | 702/2      | 455/414  |  |  |  |  |
| 4  | Intelligent public transit system using dual-mode vehicles   | 701/117    | 701/23   |  |  |  |  |
| 5  | System for providing global portable internet access using low earth orbit satellite and satellite direct radio broadcast system | 709/219    | 725/63   |  |  |  |  |
| 6  | Computer program apparatus for determining behavioral profile of a computer user   | 705/10     | 705/1  |  |  |  |  |
| 7  | Evacuated tube transport   | 104/138.1  | 104/130.05;<br>104/27;<br>104/28                       |  |  |  |  |
| 8  | Ergonomic man-machine interface incorporating adaptive pattern recognition based control system                                  | 700/17     | 382/181;<br>382/190;<br>700/83                         |  |  |  |  |
| 9  | Method and apparatus for determining behavioral profile of a computer user   | 705/10     | 705/1;<br>725/14;<br>725/46                            |  |  |  |  |
| 10 | Human factored interface incorporating adaptive pattern recognition based controller apparatus                                   | 713/600    | 348/110;<br>348/27;<br>348/734;<br>712/240;<br>712/245 |  |  |  |  |

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| 2  |                      | Rowe, Lynn T. et al.       | ×           |   |   |   |   |   |   |
| 3  |                      | Burfeind, Craig et al.     | Ø           |   |   |   |   |   |   |
| 4  |                      | McCrary, Homer T.          | ×           |   |   |   |   |   |   |
| 5  |                      | Rothblatt, Martine A.      | $\boxtimes$ |   |   |   |   |   |   |
| 6  |                      | Gerace, Thomas A.          | Ø           |   |   |   |   |   |   |
| 7  |                      | Oster, Daryl               | $\boxtimes$ |   |   |   |   |   |   |
| 8  |                      | Hoffberg, Steven M. et al. | ☒           |   |   |   |   |   |   |
| 9  |                      | Gerace, Thomas A.          | ⊠           |   |   |   |   |   |   |
| 10 |                      | Hoffberg, Steven M. et al. |             |   |   |   |   |   |   |

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| 4 | $\boxtimes$ | $\boxtimes$ | US 6307573 B1        | 20011023   | 41    |

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| 1 | Generation and distribution of personalized multimedia natural phenomenological information  | 702/2      |  |
| 2 | Method and system for presenting television programming and interactive entertainment        | 345/717    | 345/719;<br>345/733;<br>345/758;<br>348/552;<br>725/112;<br>725/113;<br>725/136;<br>725/61 |
| 3 | Generation and distribution of personalized multimedia natural-phenomenological information  | 702/2      | 455/414  |
| 4 | Graphic-information flow method and system for visually analyzing patterns and relationships | 345/764    | 345/440;<br>345/803;<br>345/804;<br>345/854;<br>705/26;<br>707/512                         |

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| 2 |                      | White, Chris M. et al. | × |   |   |   |   |   |   |
| 3 |                      | Burfeind, Craig et al. |   |   |   |   |   |   |   |
| 4 |                      | Barros, Barbara L.     |   |   |   |   |   |   |   |

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| 1 | Generation and distribution of personalized multimedia natural phenomenological information | 702/2      |              |
| 2 | Encapsulated, streaming media automation and distribution system                            | 725/47     | 725/87       |
| 3 | Generation and distribution of personalized multimedia natural-phenomenological information | 702/2      | 455/414      |

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| 1 |                      | Burfeind, Craig et al. | ×           |   |   |   |   |   |   |
| 2 |                      | Rowe, Lynn T. et al.   | $\boxtimes$ |   |   |   |   |   |   |
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| 1  | REMOTE DATA ACCESS AND MANAGEMENT SYSTEM UTILIZING HANDWRITING INPUT                                      | 707/503    |  |  |  |  |
| 2  | Generation and distribution of personalized multimedia natural phenomenological information               | 702/2      |  |  |  |  |
| 3  | Multimedia information and control system for automobiles   | 701/1      |  |  |  |  |
| 4  | Single-button remote access to a synthetic channel page of specialized content                            | 348/569    | 725/38;<br>725/51  |  |  |  |
| 5  | Telecommunications initiated data fulfillment system  | 705/77     |  |  |  |  |
| 6  | System and method for picture-in-browser scaling  | 725/1      |  |  |  |  |
| 7  | Automatic prompting for printer ink refill  | 705/26     | 705/14;<br>705/27  |  |  |  |
| 8  | Information descriptor and extended information descriptor data structures for digital television signals | 725/39     |  |  |  |  |
| 9  | System and method for utility enterprise management   | 705/7      |  |  |  |  |
| 10 | ELECTRONIC-MAIL REMINDER FOR<br>AN INTERNET TELEVISION<br>PROGRAM GUIDE                                   | 709/218    |  |  |  |  |
| 11 | Methods and systems for networked camera control  | 348/211    | 348/14.03  |  |  |  |
| 12 | Multimedia information and control system for automobiles   | 701/1      |  |  |  |  |
| 13 | Multimedia information and control system for automobiles   | 701/1      | 701/36   |  |  |  |
| 14 | Multimedia information and control system for automobiles   | 701/1      | 701/211  |  |  |  |
| 15 | Encapsulated, streaming media automation and distribution system  | 725/47     | 725/87   |  |  |  |
| 16 | Method and system for presenting television programming and interactive entertainment                     | 345/717    | 345/719;<br>345/733;<br>345/758;<br>348/552;<br>725/112;<br>725/113;<br>725/136;<br>725/61 |  |  |  |

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| 1  |                      | Tran, Bao Q.                  | ⊠           |   |   |   |   |   |   |
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| 3  |                      | Obradovich, Michael L.        | ×           |   |   |   |   |   |   |
| 4  |                      | Istvan, Anthony F. et al.     | ×           |   |   |   |   |   |   |
| 5  |                      | Rosenhaft, Matthew et al.     | ⊠           |   |   |   |   |   |   |
| 6  |                      | Istvan, Anthony F.            | ☒           |   |   |   |   |   |   |
| 7  |                      | Istvan, Anthony F.            | ⊠           |   |   |   |   |   |   |
| 8  |                      | Corl, Mark T.                 | ⊠           |   |   |   |   |   |   |
| 9  |                      | Mazereeuw, Jeff et al.        | ⊠           |   |   |   |   |   |   |
| 10 |                      | BOYER, FRANKLIN E. et al.     | $\boxtimes$ |   |   |   |   |   |   |
| 11 |                      | Mottur, Peter A. et al.       | Ø           |   |   |   |   |   |   |
| 12 |                      | Obradovich, Michael L.        | ⊠           |   |   |   |   |   |   |
| 13 |                      | Obradovich, Michael L. et al. | ☒           |   |   |   |   |   |   |
| 14 |                      | Obradovich, Michael L. et al. | ⊠           |   |   |   |   |   |   |
| 15 |                      | Rowe, Lynn T. et al.          | ☒           |   |   |   |   |   |   |
| 16 |                      | White, Chris M. et al.        |             |   |   |   |   |   |   |